**Ryan’s Well Fermi Question**

To remember Ryan Hreljac’s accomplishments and the impact of our wasteful use of clean water our Fermi problem will consider the following:

*Many people let the tap run while brushing their teeth. How many litres of clean water is wasted a year in Canada while people are brushing their teeth?*

Assumptions made:

1. The population of Canada is 34 018 957
2. Children under the age of one do not brush their teeth
3. There are 1500 children born each day
4. No children were harmed in the making of this question
5. 3 out of every 4 people let the tap run while brushing their teeth
6. People brush their teeth for an average of two minutes
7. Assume good hygiene such that people brush their teeth twice a day
8. The flow rate of the average bathroom tap is 3.2 litres per minute
9. All water during the brushing is wasted

Calculations:

1. The number of children under the age of one are:
2. The number of Canadians who brush their teeth are:
3. The number of Canadians who run the tap while brushing their teeth are:
4. The amount of water wasted per individual brushing is:
5. The amount of water wasted during brushing by an individual on a daily basis is:
6. The amount of water wasted during brushing nationwide on a daily basis is:
7. The amount of water wasted during brushing nationwide in a year is:

Answer:

*So Canadians waste 117 283 986 496 litres of clean water a year while brushing their teeth.*